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Syed et al.

[45] Date of Patent: **Aug. 15, 2000**[54] **METHOD AND APPARATUS FOR COPYING DATA THAT RESIDES IN A DATABASE**

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[52] U.S. Cl. .... 707/10; 707/2

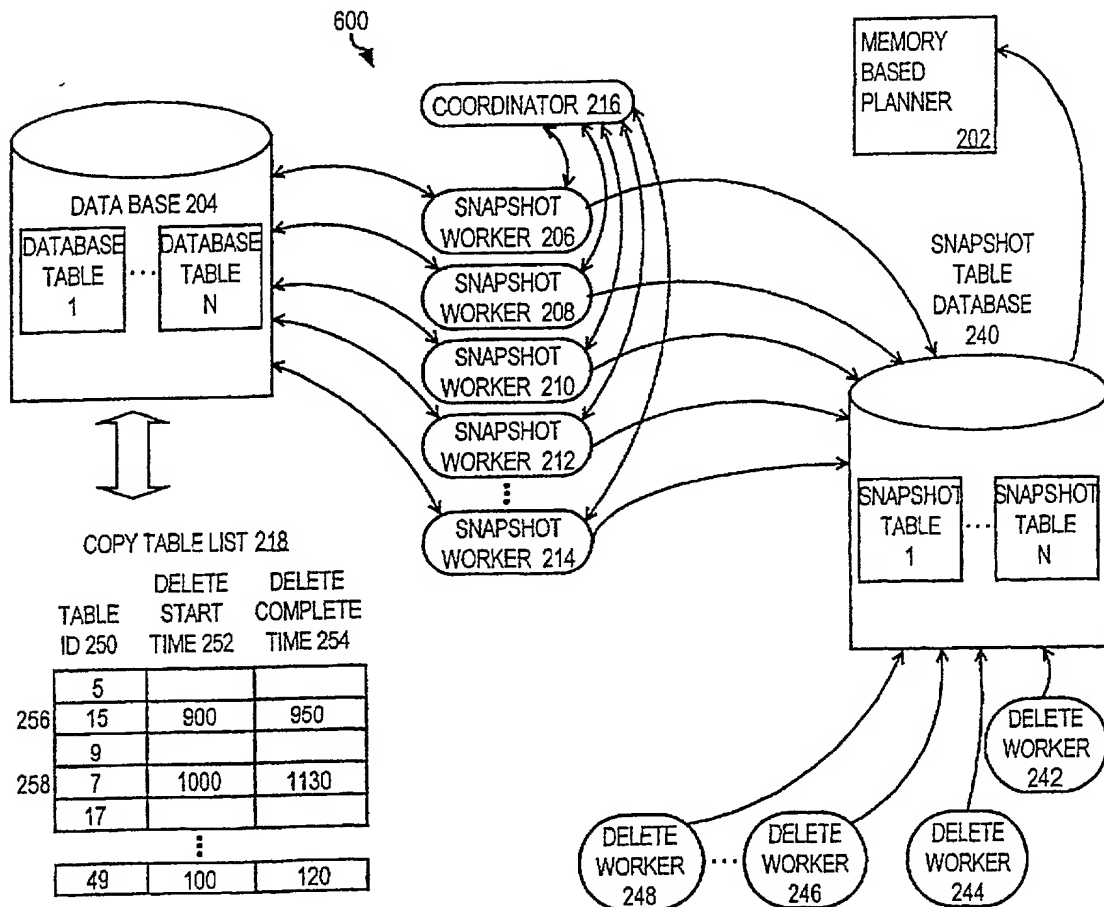
[58] Field of Search ..... 707/1-10, 100-104, 707/200-206, 500-542; 705/1-11

[56] **References Cited****U.S. PATENT DOCUMENTS**5,168,444 12/1992 Cukor et al. .... 705/1  
5,560,005 9/1996 Hoover et al. .... 707/10

5,724,575 3/1998 Hoover et al. .... 707/10

*Primary Examiner*—Ruay Lian Ho*Attorney, Agent, or Firm*—McDermott, Will & Emery[57] **ABSTRACT**

A consistent set of data is supplied to a software application from databases. When a particular set of data is identified, a first process is requested to obtain a snapshot time from a database server associated with the first database. The snapshot time causes all subsequent reads of the first database by the first process to return data that reflects a database state associated with the snapshot time. A first set of data in the first database is locked in order to produce a copy of data from a first database. After locking the first set of data, a plurality of processes are requested to obtain snapshot times from a database server associated with the first database. The snapshot times cause all subsequent reads of the first database by the plurality of processes to return data from the first database as of the snapshot times.

**41 Claims, 10 Drawing Sheets**

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